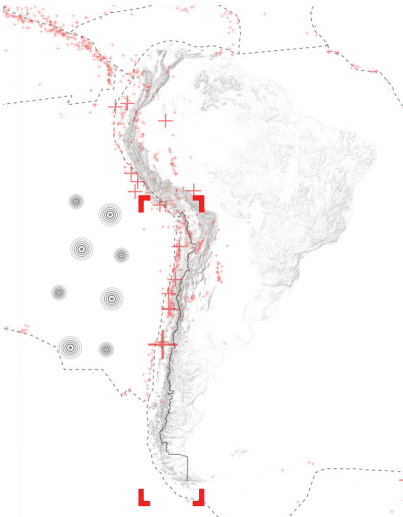


INTRODUCTION: LIVING IN THE EDGE. UNDERSTANDING NATURAL STRUCTURES

Landscape Urbanism in Chile: The case of Andalien River in Concepcion city

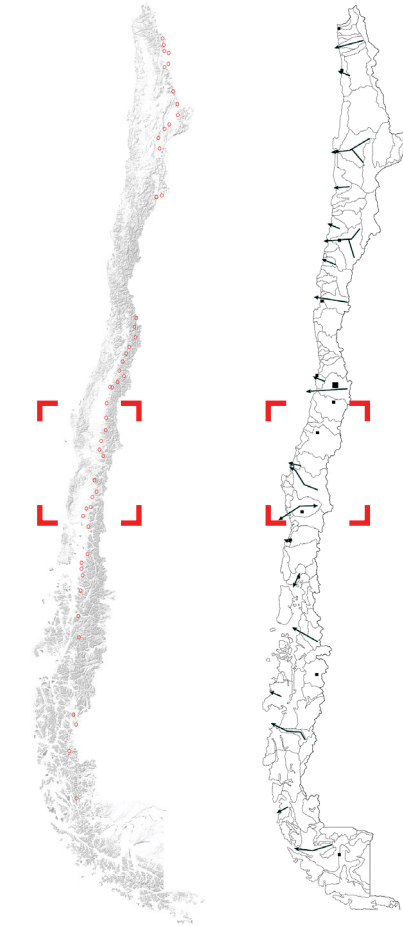
All the sources used in this research are available with the authors



Chile in the Ring of Fire

Earthquakes, volcanoes, tsunamis; river delta's and extreme climate rhythms shape our case study landscape

'Living in the Edge' to cope with the dynamics of its surrounding landscape. The saturation of this edge however forces people to leave safe ground.

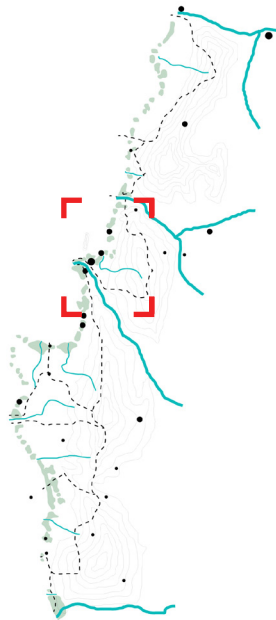


Relief + 42 Active Volcanoes

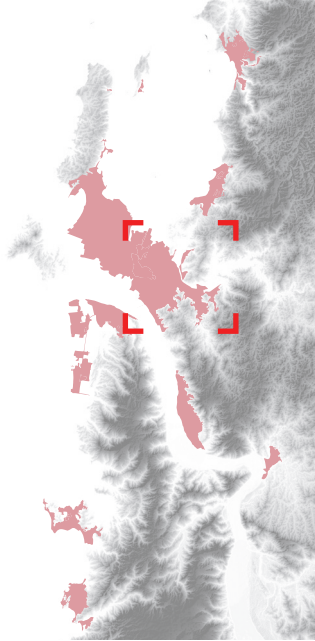
+160 Watersheds



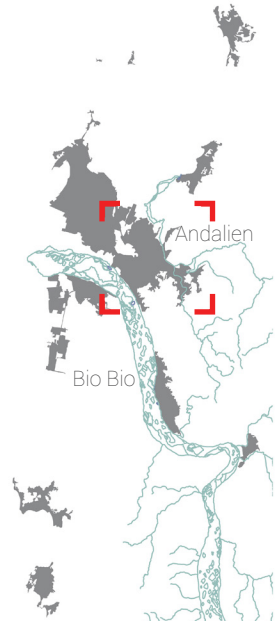
Catastrophic Flood-imp. area. 2002-2006
272.111 People affected



Coastal Water Landscape



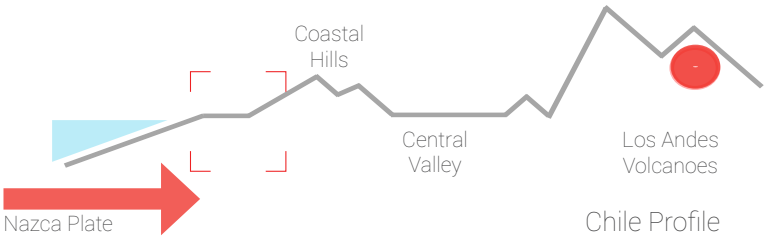
Living In The Edge
35.575 People Exposed to Logging and Flooding



12000 people affected by the Andalien river

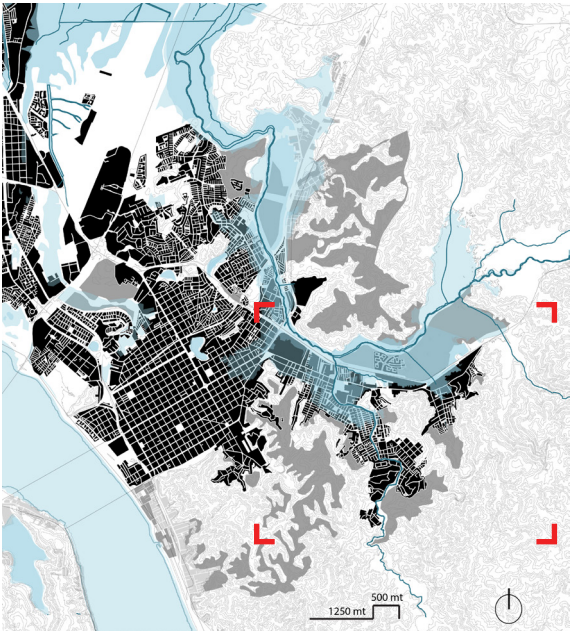


Geomorphological history of the waterscape (Millions of years). Why we live in a wetland?



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ANALYSIS CURRENT URBAN EXPANSION - WHAT IS HAPPENING?



Proposed Urban Expansion, Plan Regulador 2002, by Maarten Demarsin



Real Estate development Valle Noble

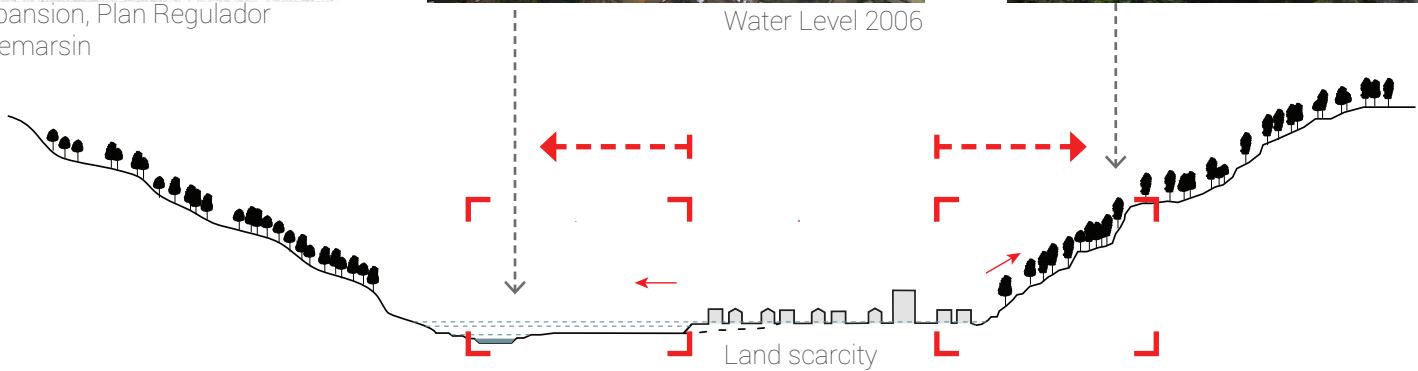


Water Level 2006

1954-2000 8,46 km² growth of which 71 % exposed to risks



Governmental development Barrio Modelo. Social housing, original budget 6906 US-\$/housing unit increased to 23.021 US-\$ after landslide.



Understanding another way of growing



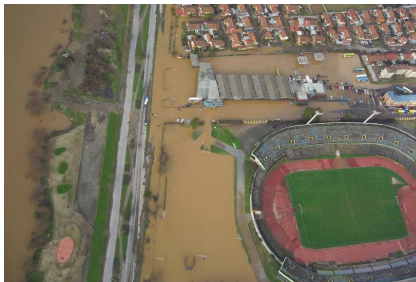
Caleta Tortel, Aysen



Palafitos, Chiloé



Aguita De La Pérdiz , Concepción



Consequences. 2006

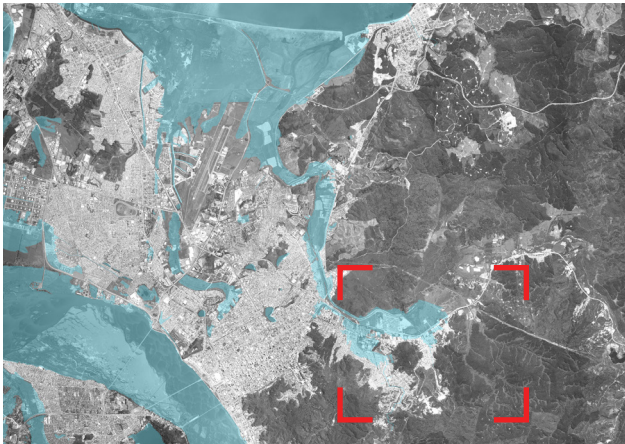


Consequences. 2006

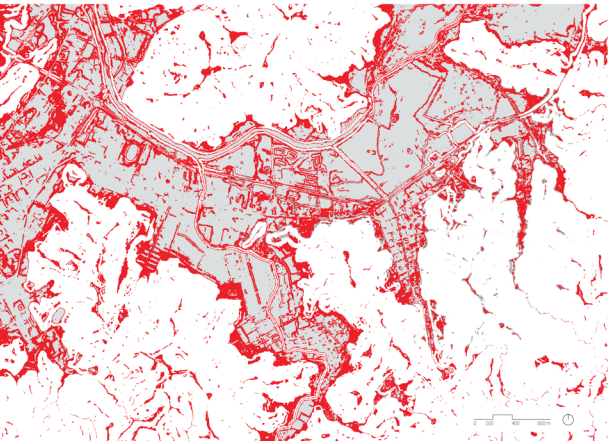
PROPOSAL: HOW TO LIVE IN THE EDGE?

Expanding the edge:

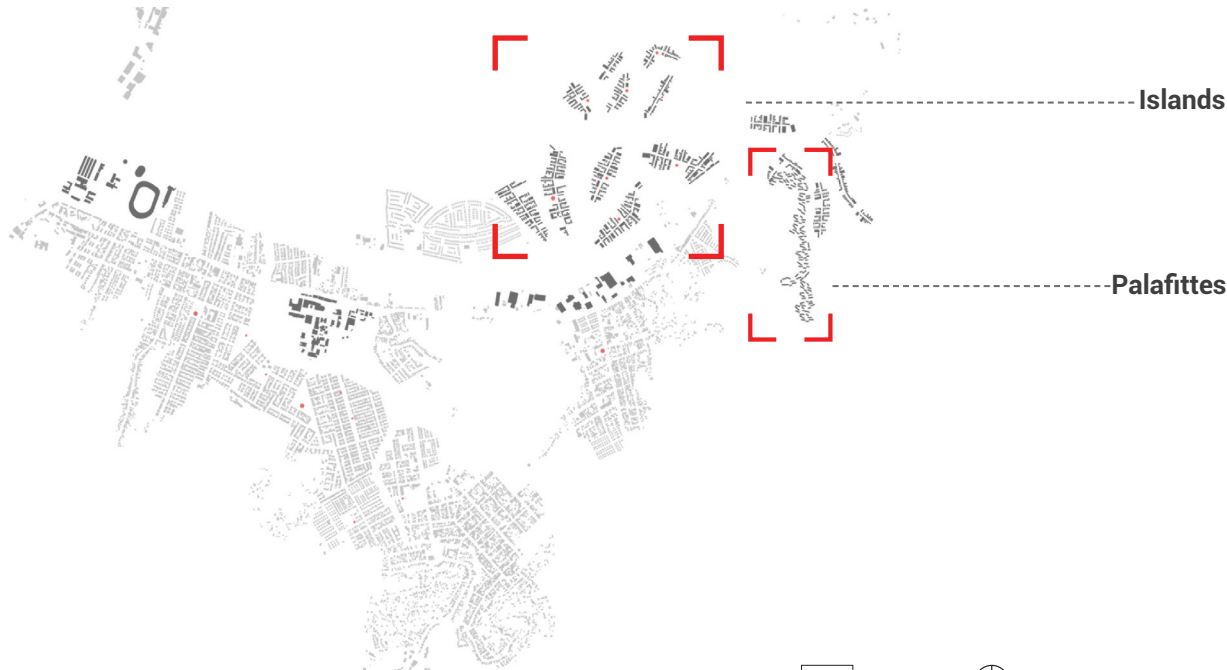
Few buildable space between the hills and the floodplains. So, we expand the edge with **islands** and **palafittes**.



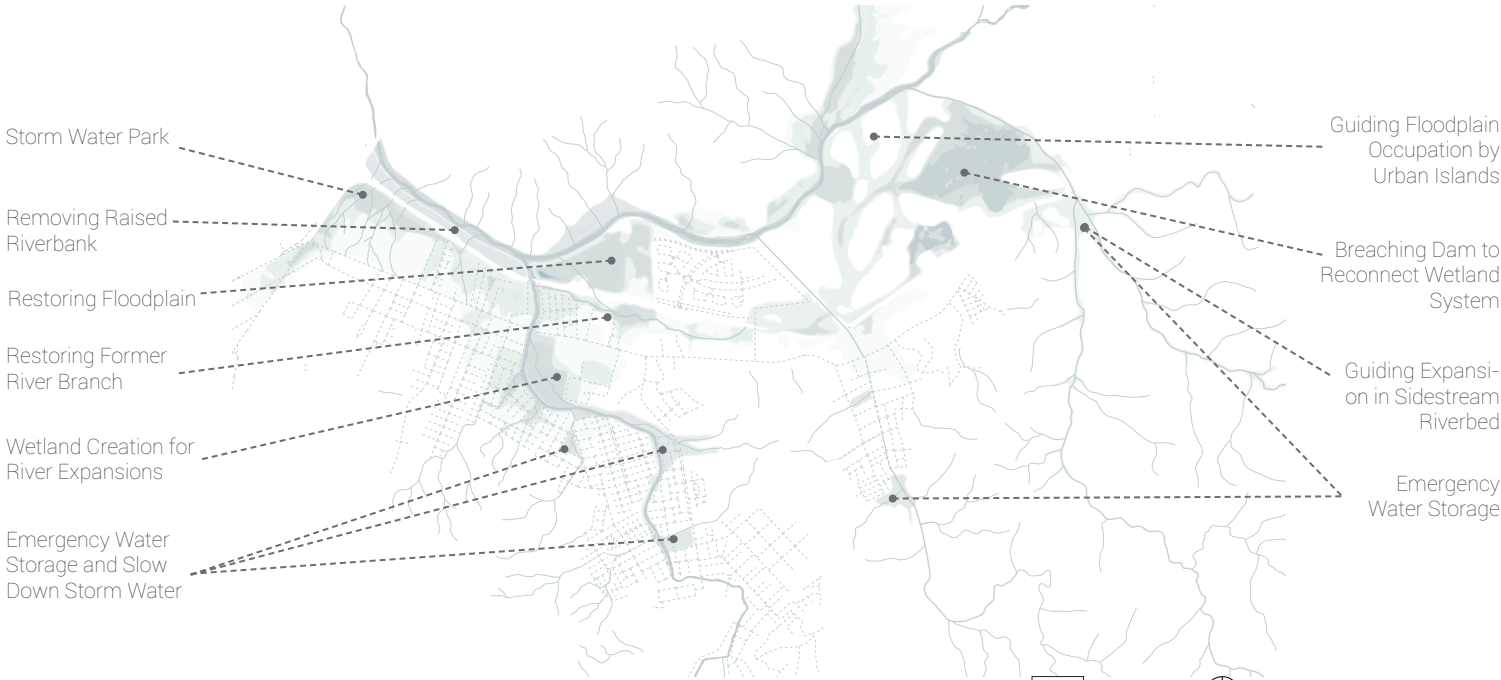
Encounter of City and Andalien River



Slopes Floodable Buildable Landslide

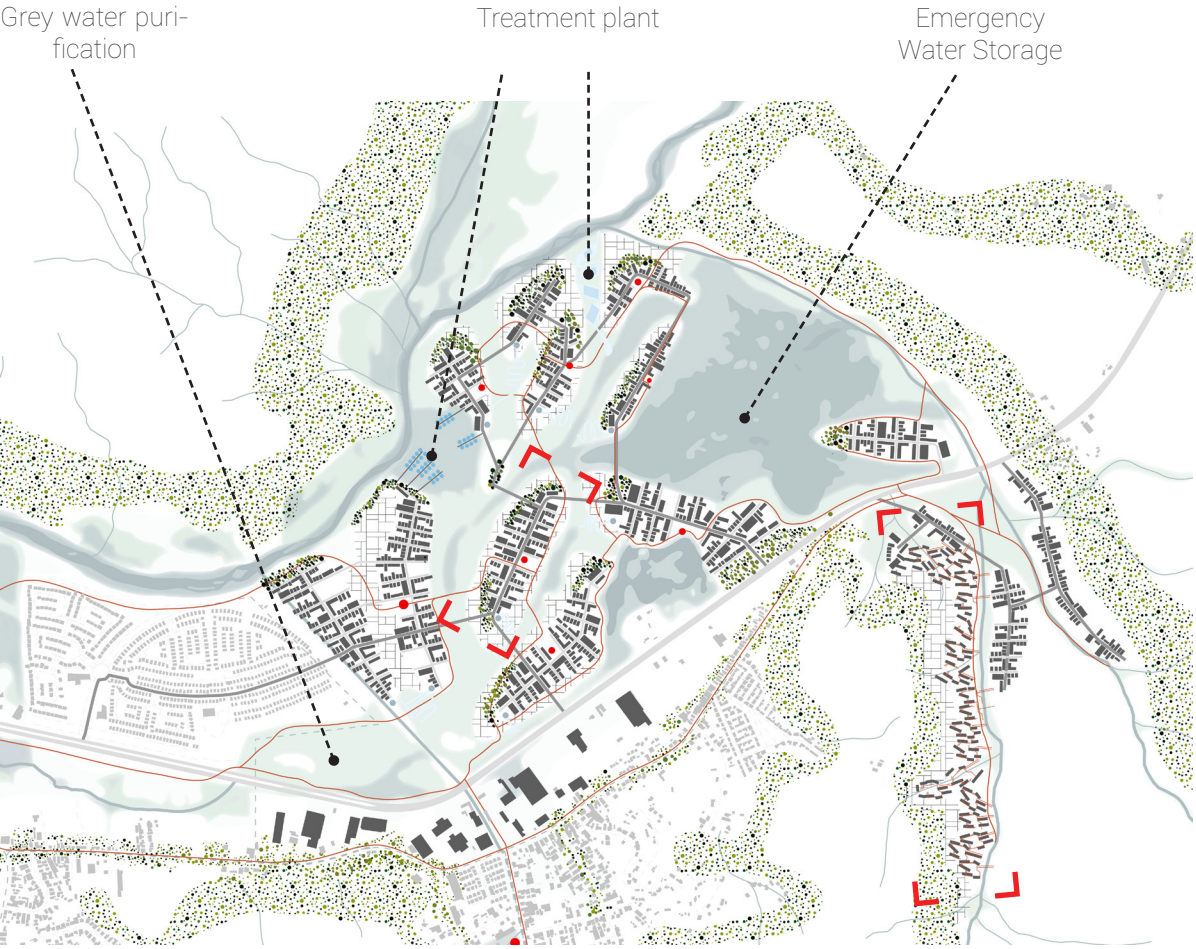


Guiding Urban Growth

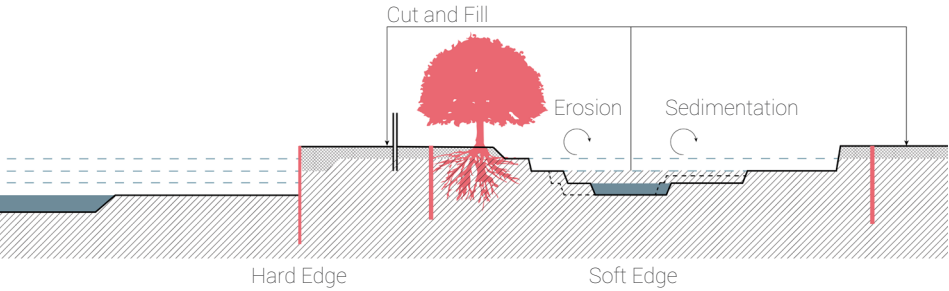


Choreographing and managing the waterscape

PROPOSAL - URBAN SCALE - ISLANDS

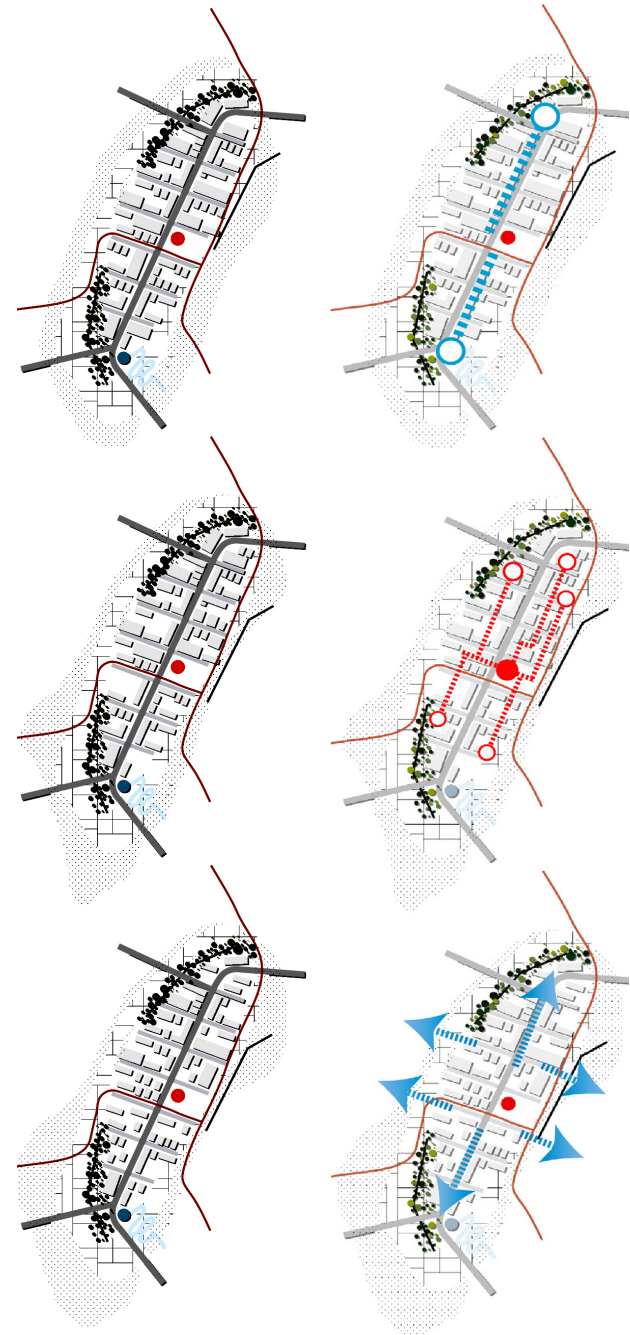


Water



Landforming Dynamics

Decentralized system: Water - Energy - Emergency Management



Community Center
Social Resilience
Disaster management
Energy hub

Bikepath
Decentralization
Landscape Experience

Green Corridor
Erosion Control
Restoring Riparian

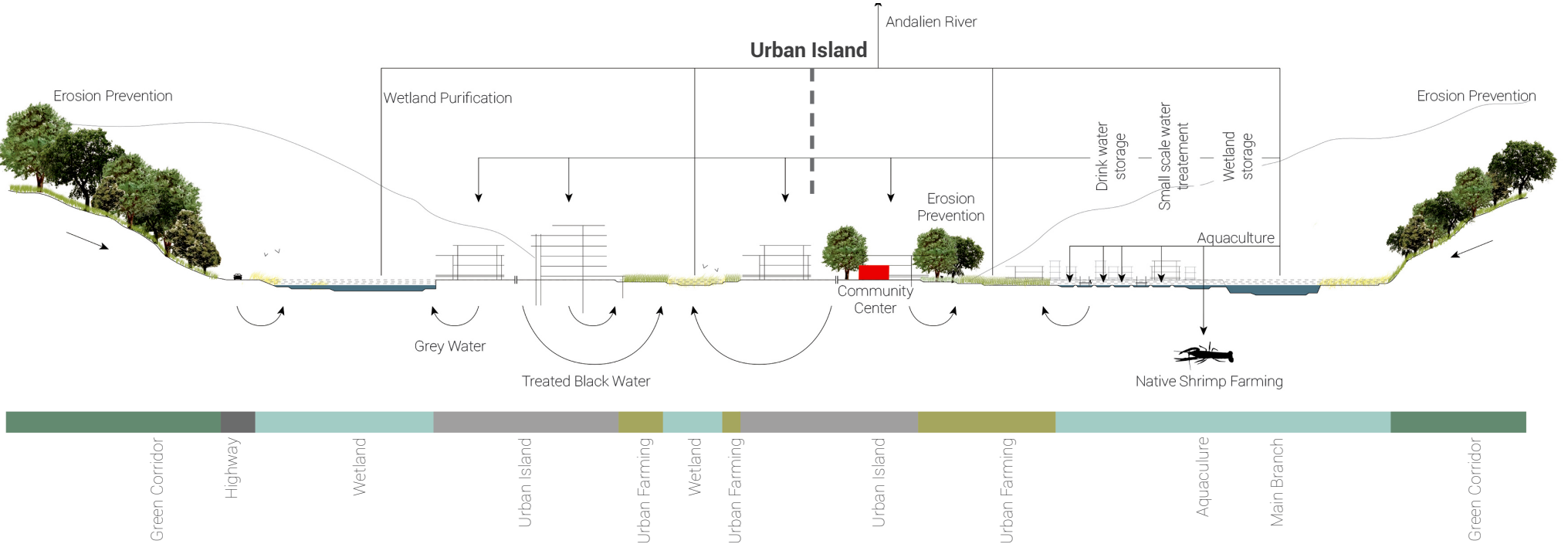
Urban Farming
Productivity in protecting areas

Kathalysers
Guiding Urban Growth

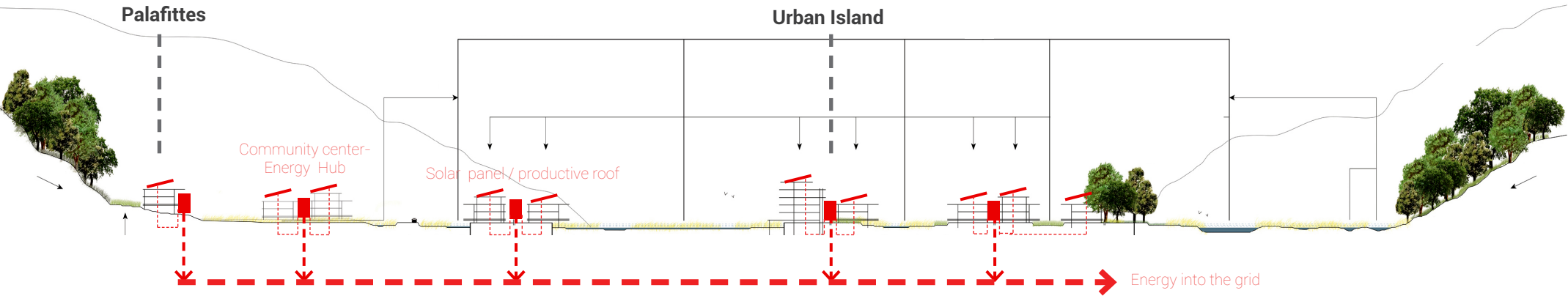
Rain harvest

Winter Rain flows

PROPOSAL_URBAN SCALE_SECTIONS DECENTRALIZED EMERGENCY MANAGEMENT

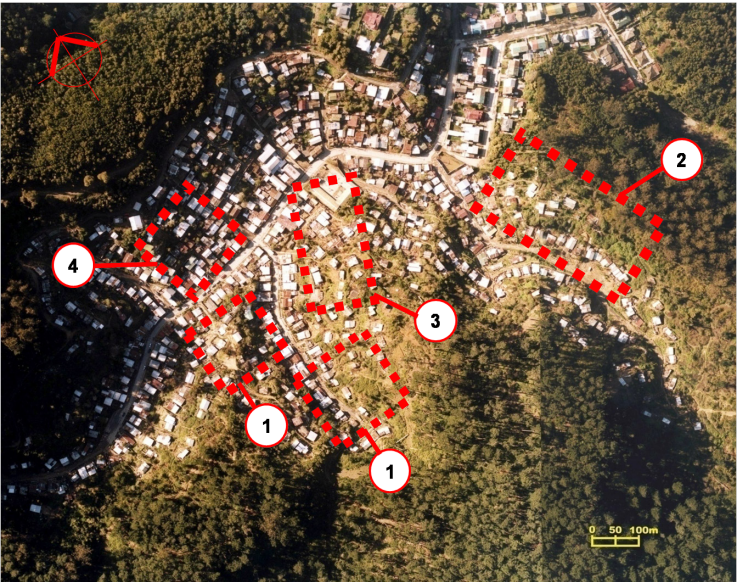


Decentralized water system

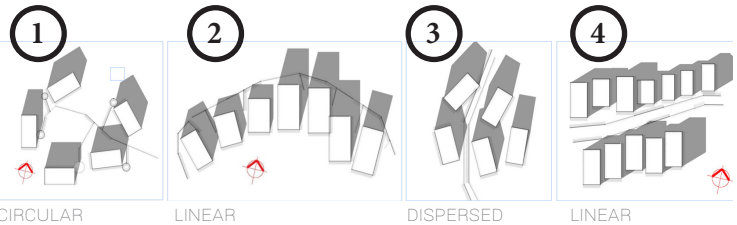


Decentralized energy system Micro-Network

ANALYSIS - SOCIAL PATTERNS ON THE HILLS



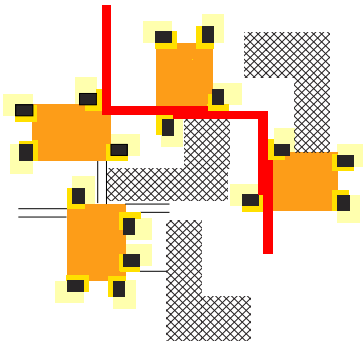
Reference Social-Spatial Pattern / levels of public spaces / community



Definition of intermediate levels Inside the CELL

A living reference to occupy the edge the informal settlement **Aguita De La Perdiz** Concepcion.

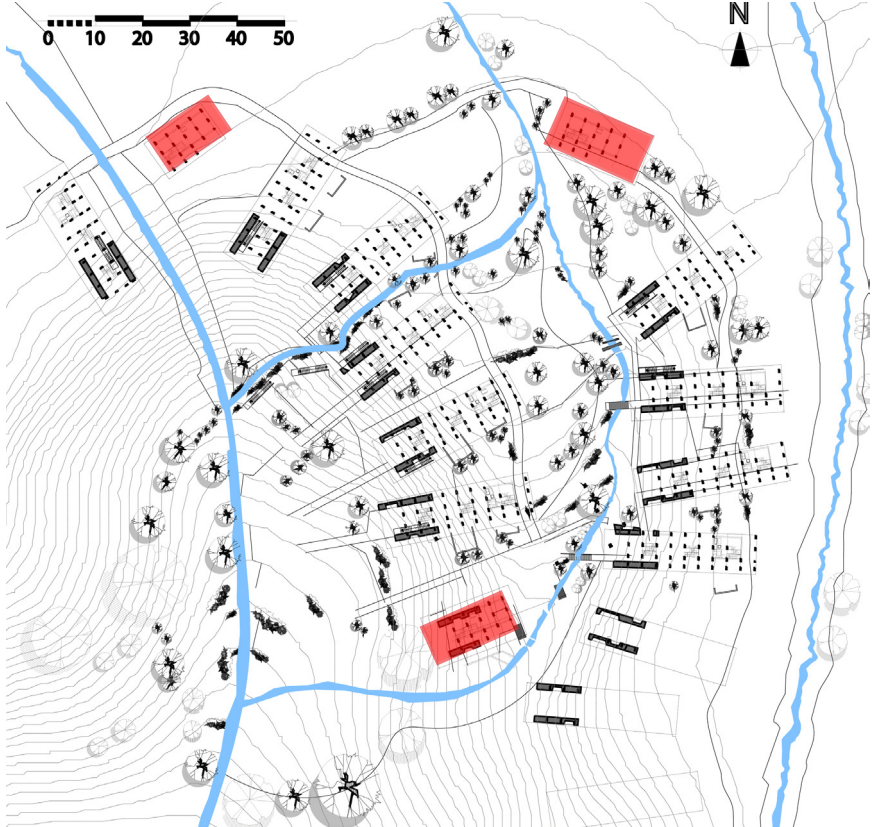
Cells grouping an example of social resilience



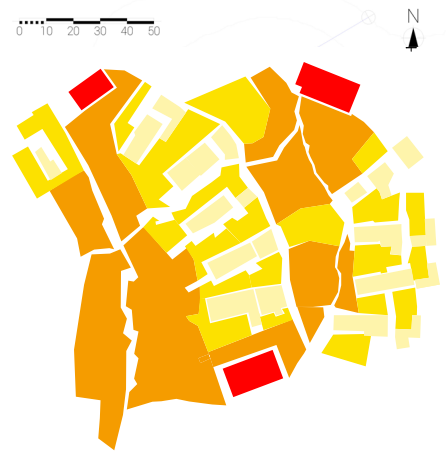
Cells

- COMMUNITY SPACE OF THE CELL
- INTERMEDIATE PRIVACY
- MAJOR PRIVACY
- HOUSING
- NEIGHBORHOOD INTRASTRUCTURE
- GEOGRAPHICAL EDGES

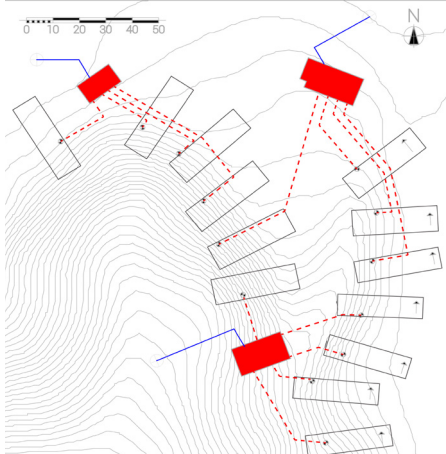
PROPOSAL-PALAFITTES



General plan - 3 cells

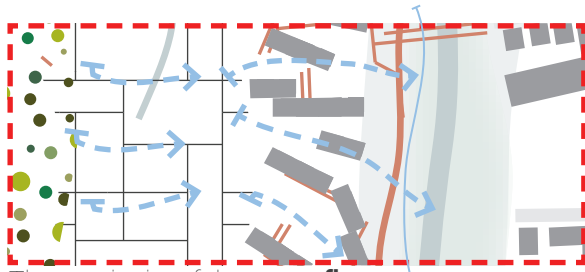


Intermediate levels of public space

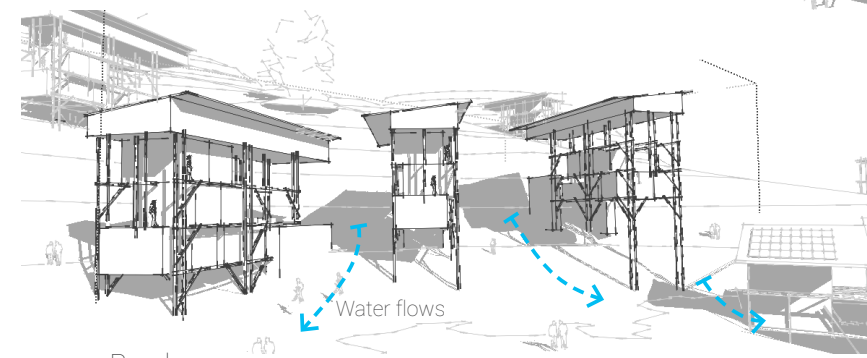
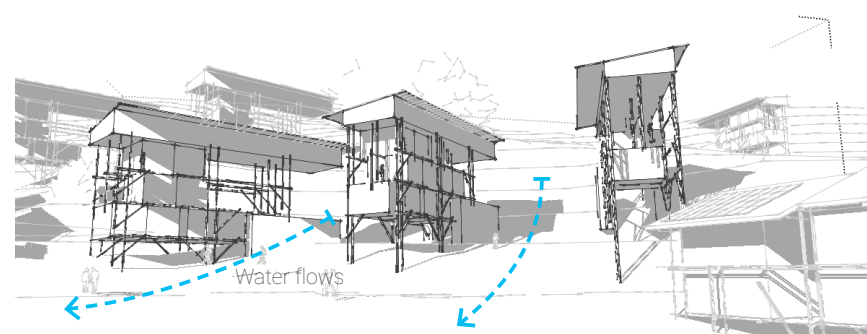
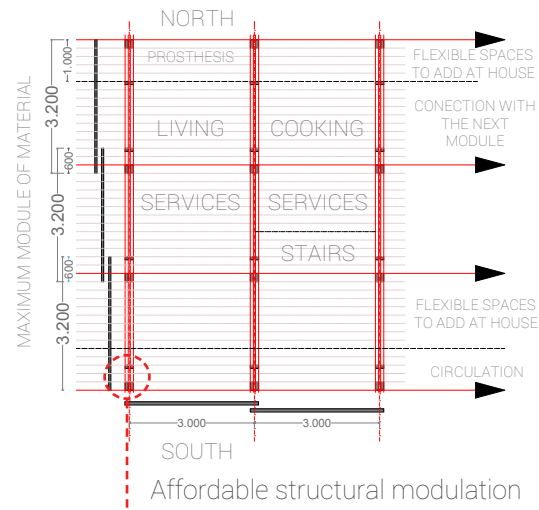


Micro grid

BUILDING IN THE EDGE SELF-SUFFICIENT AND INCREMENTAL PALAFITTE



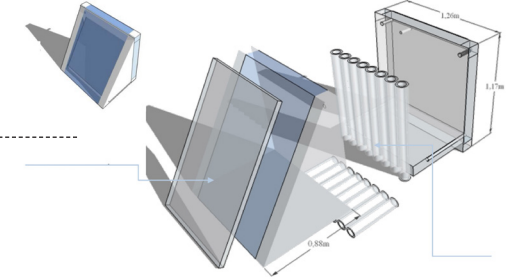
The continuity of the **water flows**



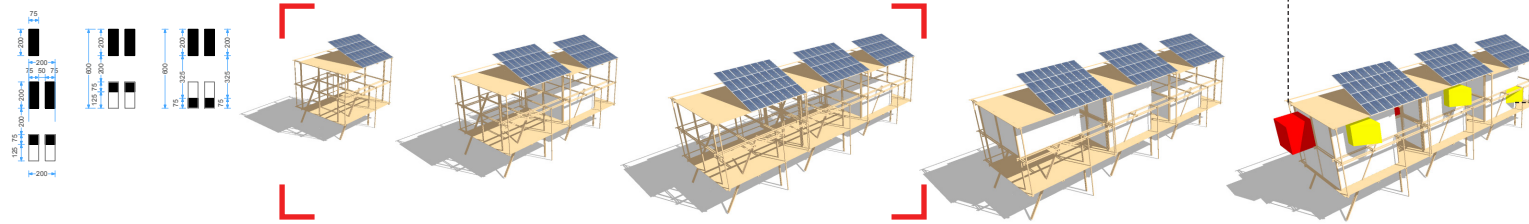
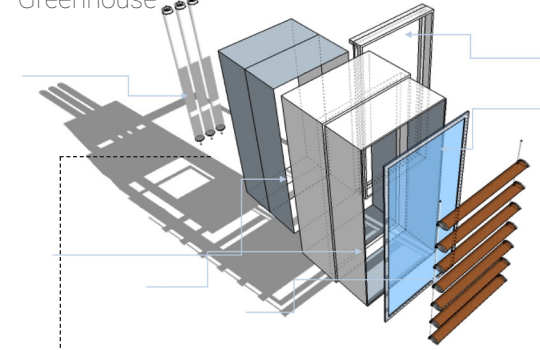
Renders

Bioclimatic self-built components. Progressive refurbishment strategy

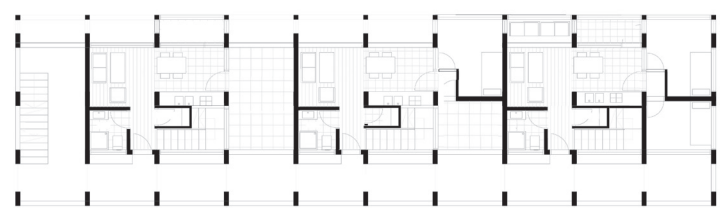
Solar oven



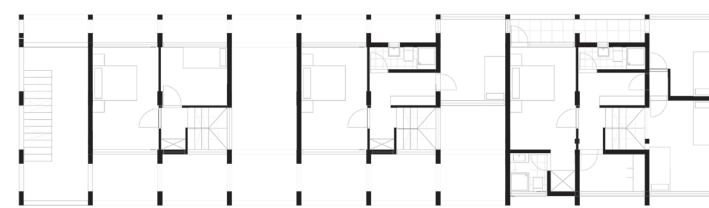
Greenhouse



Three **progressive typologies** of "Solar base-buildings" as adaptable supports (to infill)



First floor

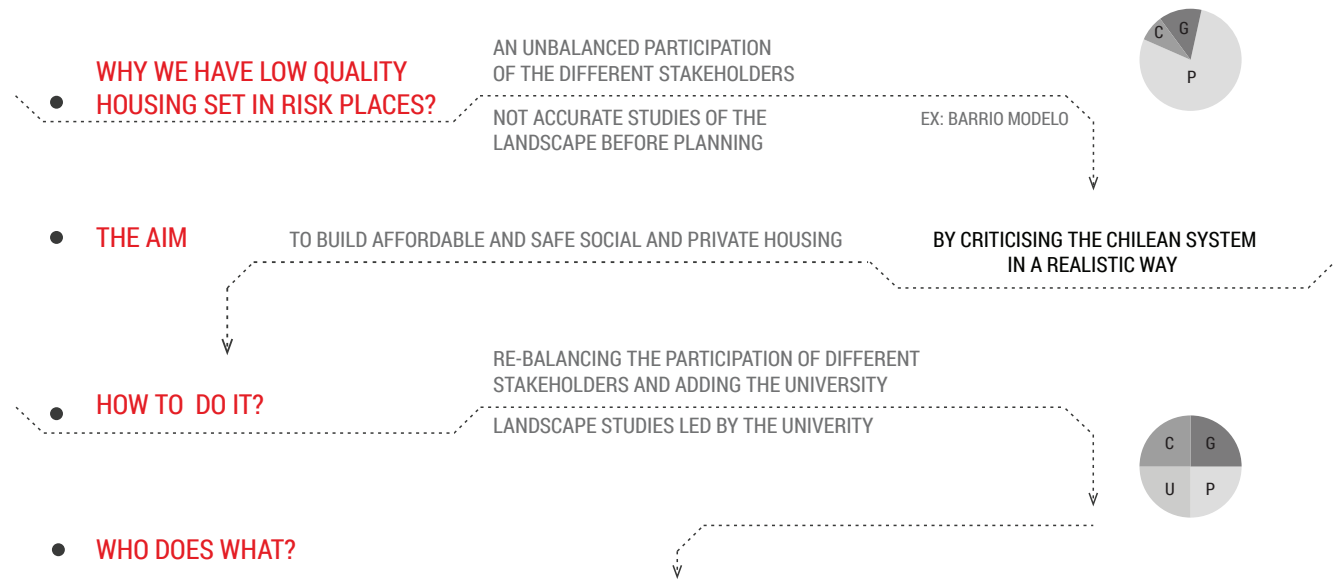


Second floor



Extensions

MANAGEMENT MODEL



GOVERNMENT	COMMUNITY	UNIVERSITY	PRIVATE ENTITIES
IN CHILE FLOODPLAINS AND RIVER BEDS ARE NATIONAL GOODS. SO, G PROVIDES THE LAND IN AN ADAPTED SYSTEM OF A "COMMUNITY LAND TRUST" MAINTAINING THE CONDITION OF NATIONAL GOOD	PARTICIPATES IN DECISION MAKING CONTRIBUTES WITH SAVINGS AS THEY DO NOW CONTRIBUTES WITH LABOR	DEVELOPS ACCURATE AND SPECIALIZED LANDSCAPE ANALYSIS PARTICIPATES IN DECISION MAKING	DEVELOPS SPECIALIZED WORKS PROVIDES ELEMENTS AND MATERIALS PARTICIPATES IN DECISION MAKING
GIVES SUBSIDIES FOR SOCIAL HOUSING PARTICIPATES IN DECISION MAKING			

